

## **UPDATED INFORMATIVE DIGEST**

### **REGULATION FOR ENERGY EFFICIENCY AND CO-BENEFITS ASSESSMENT OF LARGE INDUSTRIAL FACILITIES**

#### **Sections Affected**

Adoption of California Code of Regulations (CCR), title 17, division 3, chapter 1, subchapter 10, article 4, subarticle 9. Energy Efficiency and Co-Benefits Assessment of Large Industrial Facilities, sections 95600, 95601, 95602, 95603, 95604, 95605, 95606, 95607, 95608, 95609, 95610, 95611, and 95612.

#### **Background**

In 2006, the Governor signed California's Global Warming Solutions Act of 2006 (AB 32), which set the State's greenhouse gas (GHG) reduction goals into law. AB 32 directed the ARB to begin developing discrete early actions to be made enforceable by 2010 and to prepare a Scoping Plan that will identify how best to reach the 2020 GHG limit. The Board approved the Scoping Plan in December 2008. In the Scoping Plan, the Board outlined a comprehensive set of actions to reduce GHG emissions. This regulation is one of the many measures identified in the Scoping Plan. The goals for the regulation are to:

- 1) identify, for high GHG emitting stationary industrial facilities in California, the facility's energy consumption and the associated GHG, criteria pollutant, and toxic air contaminant emissions;
- 2) determine potential energy efficiency improvement opportunities for reducing GHG, criteria pollutant, and toxic air contaminant emissions; and
- 3) identify potential future actions for obtaining further reductions.

Industrial facilities in California are a large source of GHG emissions. In 2008, these facilities emitted approximately 160 million metric tonnes of carbon dioxide equivalent (MMTCO<sub>2</sub>e) emissions annually or about one-third of the total GHG emissions from all sources in California. Information gathered from the implementation of the regulation will be a valuable resource in determining what GHG emission reduction opportunities are available as well as what criteria pollutant and toxic air contaminant co-benefits might be realized. ARB staff will use these data to inform ARB's GHG, criteria pollutant, and toxic air contaminant emission reduction programs, and the next update to the Scoping Plan. Additionally, the information will help California's largest stationary sources of GHG emissions consider potential co-benefits when deciding on actions to comply with other GHG programs, such as a cap-and-trade program.

## **Description of the Regulatory Action**

The regulation requires the largest stationary sources of GHG emissions in California to provide information on the energy efficiency improvement opportunities that are available and to quantify the associated emission reductions for GHG, criteria pollutants, and toxic air contaminants.

### *Applicability*

The regulation applies to stationary sources that emitted GHG emissions greater than 0.5 MMTCO<sub>2</sub>e in 2009 and transportation fuel refineries and cement plants that emitted GHG emissions greater than 0.25 MMTCO<sub>2</sub>e in 2009. Besides refineries and cement plants, these facilities include oil and gas extraction and transmission facilities, electricity generation facilities, mineral plants, and hydrogen production facilities. Based on the emissions threshold and the GHG emissions data collected for the 2008 calendar year pursuant to the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions, Subchapter 10, Article 2, sections 95100 through 95133, title 17, CCR (Mandatory GHG Reporting Regulation), approximately 60 facilities in five industrial sectors will be affected. The industrial sectors and the number of facilities include:

- petroleum refineries (18 facilities)
- oil and gas extraction and transmission facilities (6 facilities)
- electricity generating facilities (18 facilities)
- cement plants and mineral plants (11 facilities)
- hydrogen plants (3 facilities)

The combined total GHG emissions at these 60 facilities was about 70 MMTCO<sub>2</sub>e in 2008 or about 45 percent of the total emissions from the industrial sector. These facilities are located throughout California with the largest numbers found in the Southern San Joaquin Valley, and in and around Los Angeles and San Francisco.

### *Analysis of Facility Energy Consumption and Emissions*

The regulation requires facility operators to provide a process flow diagram, the name and description of the processes and equipment used, and the facility-wide fuel and electricity consumption for the 2009 calendar year. The regulation does not require facilities to create a new emissions inventory. Instead, facilities will provide their 2009 calendar year emissions of GHG, criteria pollutants, and toxic air contaminants that were reported for the Mandatory GHG Reporting Regulation (for GHG) and local air district reporting programs (for criteria pollutants and toxic air contaminants). The GHG emissions data reported will be validated by a third party verification process that is required by the Mandatory GHG Reporting Regulation. The criteria pollutant and toxic air contaminant emission data will be verified by ARB and district staff as part of their existing data validation and review programs.

### *Analysis of Potential Energy Efficiency Improvements*

Facility operators are required to conduct a comprehensive assessment of potential energy efficiency improvement projects that are possible at the facility and the associated impacts that would occur if the projects were implemented. The assessment includes a description of each project, the types of processes and equipment involved, preliminary estimates for costs, timing, status (if the project is being implemented), project life, energy and cost savings, potential emission reductions (GHG, criteria pollutant and toxic air contaminant), district permitting impacts, and other project related impacts.

### *Submittal of a Comprehensive Report*

Facility operators are required to submit a report, called the Assessment Report, containing the facility's energy consumption and emissions analysis and the energy efficiency improvement analysis. The Assessment Reports will be submitted to ARB by the end of 2011, and will then undergo an internal ARB review process to determine completeness and validity. If a report is deemed to be incomplete, a new assessment conducted by an approved third party assessor may be required. Completed assessment reports submitted to the ARB will be made publicly available on ARB's Climate Change website in April 2012. Staff will also develop a draft report, to be released in mid 2012, with preliminary findings and recommendations. This draft report will be used as a starting point for discussion with all stakeholders on opportunities for further emission reductions.

### *Exemptions*

The requirements of the regulation do not apply to combined-cycle electricity generating facilities built after 1995. These facilities are considered to have the most efficient power generation process and equipment available, as determined by the California Energy Commission.

The regulation also includes an exemption for petroleum refineries that do not produce transportation fuels, such as asphalt plants, because their processes are less energy intensive, emissions are typically less than transportation fuel refineries, and there are a limited number of facilities.

The regulation also exempts mobile combustion sources and portable equipment. The Scoping Plan measure for this regulation intended it to focus on stationary sources only, and mobile and portable equipment are not required to be reported for the Mandatory GHG Reporting Regulation.

### **Comparable Federal Regulations**

There are no comparable federal regulations at this time.